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EXAMINER	
TURNER, ASHLEY D	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/780,509	HAALEN ET AL.	
	Examiner	**Art Unit**	
	ASHLEY D. TURNER	2454	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *21 October 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2/17/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-26 are rejected under 35 U.S.C. 102 (b) as being anticipated by Seaman et al hereinafter Seaman (US 6,611,502 B1).

Regarding claim 1 and 16

Referring to claim 1 Seaman discloses a method for rebooting a first bridge in a network, the network containing a plurality of bridges and operating according to a first state, the method comprising : sending notification to one or more second bridges in the network of the first bridge being scheduled for updating, thereby disturbing the first state; updating said first network bridge; restoring the first state of the network; and sending notification to the one or more second bridges of the network that the updating if the first bridge has been completed. (Col. 2 lines 51-60 In a network of bridges which have a topology managed according to the spanning tree protocol, whenever a bridge detects a change in topology, such as for example when an active link fails, the bridge notifies the root of the active topology with a bridge protocol data unit BPDU packet.

The protocol entity at the root of the topology then communicates the change to all of the bridges in the tree. Upon receiving such a notification the bridges time-out their forwarding databases on all ports, recreate the topology and relearn the MAC addresses for the forwarding databases.)

Claim 16 is similarly rejected using at least the same reasoning/ citations provided above for claim 1 since they recite the same limitations and are distinguished only by statutory category.

Regarding claim 2, 17, and 27

Referring to claim 2 Seaman discloses all the limitations of claim 2 which is described above. Seaman also discloses wherein the step of sending notification further comprises the first bridge sending a special bridge protocol data unit along a plurality of forwarding links connected to said first bridge. (Col. 6 lines 49-65 Thus, the bridge protocol entity maintains filter data in the forwarding database 120, 121, for frames being transmitted amongst the ports, and port state information 116, 117, 118, and 119 for the respective ports. The bridge protocol entity includes logic for accepting, expiring, updating and propagating configuration information according to the present invention. In particular, if the protocol entity receives a BPDU sent on a LAN by the current designated bridge and from the designated port on such bridge, that BPDU is accepted and processed even if it carries information inferior to the information previously

received. Also, because of the message acceptance rules of the present invention, a number of other changes are provided for accepting, updating, expiring and propagating configuration information. For example, the port on which the BPDU is received may have been the root port for the bridge but may not be after the change. Indeed, after the change the receiving bridge may find itself designated on the port for which the BPDU is received.)

Claims 17 and 27 are similarly rejected using at least the same reasoning/ citations provided above for claim 2 since they recite the same limitations and are distinguished only by statutory category.

Regarding claim 3 and claim 18

Referring to claim 3 Seaman discloses all the limitations of claim 3 which is described above. Seaman also discloses wherein the special BPDU is selected from the group consisting of a normal spanning tree protocol configuration and a rapid spanning tree protocol configuration. (Col. 6 lines 49-65 Thus, the bridge protocol entity maintains filter data in the forwarding database 120, 121, for frames being transmitted amongst the ports, and port state information 116, 117, 118, and 119 for the respective ports. The

bridge protocol entity includes logic for accepting, expiring, updating and propagating configuration information according to the present invention. In particular, if the protocol entity receives a BPDU sent on a LAN by the current designated bridge and from the designated port on such bridge, that BPDU is accepted and processed even if it carries information inferior to the information previously received. Also, because of the message acceptance rules of the present invention, a number of other changes are provided for accepting, updating, expiring and propagating configuration information. For example, the port on which the BPDU is received may have been the root port for the bridge but may not be after the change. Indeed, after the change the receiving bridge may find itself designated on the port for which the BPDU is received.)

Claim 18 is similarly rejected using at least the same reasoning/ citations provided above for claim 3 since they recite the same limitations and are distinguished only by statutory category.

Regarding claim 4 and claim 19

Referring to claim 4 Seaman discloses all the limitations of claim 4 which is described above. Seaman also discloses wherein the special BPDU message for the normal STP configuration is (configBPDU). (Col. 2 lines 59-67 The spanning tree protocol uses a distributed algorithm to select a root bridge and the shortest path to the selected root for

each LAN. Tie breakers are used to ensure that there is a unique shortest path and a unique root. The topology is maintained by periodic configuration messages known as Bridge Protocol Data Units BPDUs issued by the root, and distributed to all bridges in the tree. There are two types according to the standard known as Configuration BPDUs and Topology Change BPDUs).

Claim 19 is similarly rejected using at least the same reasoning/ citations provided above for claim 4 since they recite the same limitations and are distinguished only by statutory category.

Regarding claim 5 and 20

Referring to claim 5 Seaman discloses all the limitations of claim 6 which is described above. Seaman also discloses wherein the rapid spanning tree protocol BPDU has a message age set to a value that does not occur during normal RSTP operation. (Col. 4 lines 63-Col. 5 lines 13 In addition, logic is included on the network device for expiring and recomputing configuration information for the plurality of ports in response to detection of a failure of the link coupled to the particular port, if the particular port is in the root port role. Also information is expired and configuration information recomputed in response to receiving a configuration message on a particular port having a

maximum age parameter and a message age parameter, and in which the message age parameter is at least one of equal to, and greater than, the maximum age parameter if the port is in the root port role. Further, logic is provided on the network device to increment the message age parameter by an amount equal to about 1/X of the maximum age parameter. In this case, the parameter X designates a value twice a maximum number plus one of protocol entities traversed by messages in the network. For example, in preferred implementations, the parameter X is about 16 when the maximum number of protocol entities is 7. Alternatively, the parameter X in another embodiment is about 8.)

Claim 20 is similarly rejected using at least the same reasoning/ citations provided above for claim 5 since they recite the same limitations and are distinguished only by statutory category.

Regarding claim 6 and claim 21

Referring claim 6 Seaman discloses all the limitations of claim 6 which is described above. Seaman also discloses wherein the value is MAX age +1. (Col. 4 lines 63-Col. 5 lines 13 In addition, logic is included on the network device for expiring and

recomputing configuration information for the plurality of ports in response to detection of a failure of the link coupled to the particular port, if the particular port is in the root port role. Also information is expired and configuration information recomputed in response to receiving a configuration message on a particular port having a maximum age parameter and a message age parameter, and in which the message age parameter is at least one of equal to, and greater than, the maximum age parameter if the port is in the root port role. Further, logic is provided on the network device to increment the message age parameter by an amount equal to about 1/X of the maximum age parameter. In this case, the parameter X designates a value twice a maximum number plus one of protocol entities traversed by messages in the network. For example, in preferred implementations, the parameter X is about 16 when the maximum number of protocol entities is 7. Alternatively, the parameter X in another embodiment is about 8.)

Claim 21 is similarly rejected using at least the same reasoning/ citations provided above for claim 6 since they recite the same limitations and are distinguished only by statutory category.

Regarding claim 7 and claim 22

Referring to claim 7 Seaman discloses all the limitations of claim 7 which is described above. Seaman also discloses the step of one or more second bridges initiating a condition of not expecting additional messages from the first bridge sequent to the notification. (Col. 7 lines 62- Col.8 lines 1-10 These rules ensure rapid propagation of configuration information without adding excessively to the total number of BPDUs transmitted. Differences between these rules and the current rules of the 802.1D standard include that a bridge may send BPDUs in additional circumstances without receiving a message from the root, and that a bridge does not reply immediately to inferior information. The reply procedure of the standard is removed in a preferred system because it leads to excessively chatty behavior when the port on which the reply was to be sent was previously the root port but is no longer. With the introduction of a link hello timer, the process of contradicting bad information arising from message loss no longer relies on the next configuration propagating all the way from the root. Timeliness of information distribution which was the goal of the reply procedure is thus already assured.)

Claim 22 is similarly rejected using at least the same reasoning/ citations provided above for claim 7 since they recite the same limitations and are distinguished only by statutory category.

Regarding claim 8 and claim 23

Referring to claim 8 Seaman discloses all the limitations of claim 8 which is described above. Seaman also discloses the step of disabling a control plane of the first bridge just prior to commencement of the updating. (Col. 10 lines 58-67 and Col 11 lines 1-28 FIG. 4 illustrates the logic executed by the protocol entity for determining where to send configuration BPDUs in response to an update of the spanning tree information for the bridge. Thus, upon update of the spanning tree information for bridge A as indicated at block 300, bridge A determines whether it is becoming a root bridge for the network or believes itself to be the root bridge (block 301). If after the change bridge A believes itself to be the root bridge, then it issues a configuration BPDU on all ports with a message age of zero (block 302). If bridge A is not becoming a root bridge, then a configuration BPDU is issued on all ports of bridge A which were designated ports before the update. If the update occurred as a result of receiving a configuration BPDU from another bridge, then the message age is incremented by a message age increment, for example 1/16th of the maximum age as discussed above (block 303). Next, the protocol entity determines whether for a BPDU received on port A, if port A becomes or continues as the root port after the change (block 304). If it does continue or become a root port, then a configuration BPDU is issued on all ports for which the bridge is designated after the change, and the message age value in the BPDU is

incremented (block 305). If the port A at block 304 does not continue to be or become the root, then no additional BPDUs are issued and the algorithm ends (block 306). Thus, if bridge A becomes the root bridge after the change, then all protocol entities between the root and the leaves of the tree are notified by issuing configuration BPDUs on all ports of the root bridge. If a configuration BPDU is received on any port other than the root port, or is received on the root port, and that port ceases to be the root port, then configuration BPDUs are issued to protocol entities between all designated ports prior to the change and leaves of the tree. If a configuration BDPU is received on a root port which continues or becomes the root port after the change, then the configuration BDPU is issued on all ports for which the bridge is designated after the change, notifying protocol entities between the new root, or the same root with updated configuration information, and leaves of the tree.)

Claim 23 is similarly rejected using at least the same reasoning/ citations provided above for claim 8 since they recite the same limitations and are distinguished only by statutory category.

Regarding claim 9 and claim 24

Referring to claim 9 Seaman discloses all the limitations of claim 9 which is described above. Seaman also discloses wherein the step of restoring the first state of the network further comprises reestablishing an original spanning tree that existed in the network prior to the update of the first bridge. (Col. 10 lines 58-67 and Col 11 lines 1-28 FIG. 4 illustrates the logic executed by the protocol entity for determining where to send configuration BPDUs in response to an update of the spanning tree information for the bridge. Thus, upon update of the spanning tree information for bridge A as indicated at block 300, bridge A determines whether it is becoming a root bridge for the network or believes itself to be the root bridge (block 301). If after the change bridge A believes itself to be the root bridge, then it issues a configuration BPDU on all ports with a message age of zero (block 302). If bridge A is not becoming a root bridge, then a configuration BPDU is issued on all ports of bridge A which were designated ports before the update. If the update occurred as a result of receiving a configuration BPDU from another bridge, then the message age is incremented by a message age increment, for example 1/16th of the maximum age as discussed above (block 303). Next, the protocol entity determines whether for a BPDU received on port A, if port A becomes or continues as the root port after the change (block 304). If it does continue or become a root port, then a configuration BPDU is issued on all ports for which the bridge is designated after the change, and the message age value in the BPDU is incremented (block 305). If the port A at block 304 does not continue to be or become the root, then no additional BPDUs are issued and the algorithm ends (block 306).

Thus, if bridge A becomes the root bridge after the change, then all protocol entities between the root and the leaves of the tree are notified by issuing configuration BPDUs on all ports of the root bridge. If a configuration BPDU is received on any port other than the root port, or is received on the root port, and that port ceases to be the root port, then configuration BPDUs are issued to protocol entities between all designated ports prior to the change and leaves of the tree. If a configuration BDPU is received on a root port which continues or becomes the root port after the change, then the configuration BDPU is issued on all ports for which the bridge is designated after the change, notifying protocol entities between the new root, or the same root with updated configuration information, and leaves of the tree.)

Claim 24 is similarly rejected using at least the same reasoning/ citations provided above for claim 9 since they recite the same limitations and are distinguished only by statutory category.

Regarding claim 10 and claim 25

Referring to claim 10 Seaman discloses all the limitations of claim 10 which is described above. Seaman also discloses retrieving a port state of each port of the first bridge. (Col. 6 lines 38-52 Thus; the bridge illustrated in FIG. 1 includes ports 101, 102, 103,

and 104. Each of the ports 101-104 is coupled to a respective LAN segment 105-108. The ports support, transmit and receive functionality through respective logical link control layer entities 109-112. The LLC entities 109-112 provide for connection to bridge protocol entity 113 according to the present invention. The bridge protocol entity provides for storing parameters that identify port roles according to the present invention, and for managing transition of port state information, and for managing forwarding database entries for the plurality of ports according to the port role information. Thus, the bridge protocol entity maintains filter data in the forwarding database 120, 121, for frames being transmitted amongst the ports, and port state information 116, 117, 118, and 119 for the respective ports.)

Claim 25 is similarly rejected using at least the same reasoning/ citations provided above for claim 10 since they recite the same limitations and are distinguished only by statutory category.

Regarding claim 11

Referring to claim 11 Seaman discloses all the limitations of claim 11 which is described above. Seaman also discloses waiting for a predetermined period time to receive new network messages. (Col. 5 lines 26-31 According to this aspect of the invention, the

network devices include resources to propagate a configuration messages including the time interval parameter on a port in the designated port role periodically within the time interval indicated by the time interval parameter, whether or not the device is the root of the network.)

Regarding claim 12

Referring to claim 12 Seaman discloses all the limitations of claim 12 which is described above. Seaman also discloses wherein if the port states are retrieved via software, then no waiting period for new network messages occurs. (Col. 6 lines 38-52 Thus; the bridge illustrated in FIG. 1 includes ports 101, 102, 103, and 104. Each of the ports 101-104 is coupled to a respective LAN segment 105-108. The ports support, transmit and receive functionality through respective logical link control layer entities 109-112. The LLC entities 109-112 provide for connection to bridge protocol entity 113 according to the present invention. The bridge protocol entity provides for storing parameters that identify port roles according to the present invention, and for managing transition of port state information, and for managing forwarding database entries for the plurality of ports according to the port role information. Thus, the bridge protocol entity maintains filter data in the forwarding database 120, 121, for frames being transmitted amongst the ports, and port state information 116, 117, 118, and 119 for the respective ports.)

Regarding claim 13

Referring to claim 13 Seaman discloses all the limitations of claim 13 which is described above. Seaman also discloses wherein the step of restoring the first state further comprises the first bridge blocking all of its ports and advertising itself as a root if a BPDU is received on more than one forwarding port. (Col. 6 lines 49-65 Thus, the bridge protocol entity maintains filter data in the forwarding database 120, 121, for frames being transmitted amongst the ports, and port state information 116, 117, 118, and 119 for the respective ports. The bridge protocol entity includes logic for accepting, expiring, updating and propagating configuration information according to the present invention. In particular, if the protocol entity receives a BPDU sent on a LAN by the current designated bridge and from the designated port on such bridge, that BPDU is accepted and processed even if it carries information inferior to the information previously received. Also, because of the message acceptance rules of the present invention, a number of other changes are provided for accepting, updating, expiring and propagating configuration information. For example, the port on which the BPDU is received may have been the root port for the bridge but may not be after the change. Indeed, after the change the receiving bridge may find itself designated on the port for which the BPDU is received.)

Regarding claim 14

Referring to claim 14 Seaman discloses all the limitations of claim 14 which is described above. Seaman also discloses wherein the initiated condition includes the one or more second bridges send self-generated configBPDU messages. (Col. 2 lines 59-67 The spanning tree protocol uses a distributed algorithm to select a root bridge and the shortest path to the selected root for each LAN. Tie breakers are used to ensure that there is a unique shortest path and a unique root. The topology is maintained by periodic configuration messages known as Bridge Protocol Data Units BPDUs issued by the root, and distributed to all bridges in the tree. There are two types according to the standard known as Configuration BPDUs and Topology Change BPDUs).

Regarding claim 15

Referring claim 15 Seaman discloses all the limitations of claim 15 which is described above. Seaman also discloses wherein the step of sending notification to other bridges of first bridge update completion further comprises the one or more second bridges receiving a normal BPDU firm the first bridge. (Col. 6 lines 38-52 Thus; the bridge illustrated in FIG. 1 includes ports 101, 102, 103, and 104. Each of the ports 101-104 is coupled to a respective LAN segment 105-108. The ports support, transmit and receive functionality through respective logical link control layer entities 109-112. The LLC entities 109-112 provide for connection to bridge protocol entity 113 according to the present invention. The bridge protocol entity provides for storing parameters that identify

port roles according to the present invention, and for managing transition of port state information, and for managing forwarding database entries for the plurality of ports according to the port role information. Thus, the bridge protocol entity maintains filter data in the forwarding database 120, 121, for frames being transmitted amongst the ports, and port state information 116, 117, 118, and 119 for the respective ports.)

Regarding claim 26

Referring claim 26 Seaman discloses all the limitations of claim 26 which is described above. Seaman also discloses for updating a network bridge in a plurality of interconnected network bridges operating according to a first state comprising: a forwarding plane adapted to provide physical control of the states of a plurality of ports in the bridge; and a control plane adapted for issuing and executing instructions that control the physical action of the forwarding plane including: sending notification to one or more second bridges in the network of the first bridge being scheduled for updating, thereby disturbing the first state; updating said first network bridge; restoring the first state of the network; and sending notification to the one or more second bridges of the network that the updating of the first bridge has been completed. (Col. 10 lines 58-67 and Col 11 lines 1-28 FIG. 4 illustrates the logic executed by the protocol entity for determining where to send configuration BPDUs in response to an update of the spanning tree information for the bridge. Thus, upon update of the spanning tree information for bridge A as indicated at block 300, bridge A determines whether it is

becoming a root bridge for the network or believes itself to be the root bridge (block 301). If after the change bridge A believes itself to be the root bridge, then it issues a configuration BPDU on all ports with a message age of zero (block 302). If bridge A is not becoming a root bridge, then a configuration BPDU is issued on all ports of bridge A which were designated ports before the update. If the update occurred as a result of receiving a configuration BPDU from another bridge, then the message age is incremented by a message age increment, for example 1/16th of the maximum age as discussed above (block 303). Next, the protocol entity determines whether for a BPDU received on port A, if port A becomes or continues as the root port after the change (block 304). If it does continue or become a root port, then a configuration BPDU is issued on all ports for which the bridge is designated after the change, and the message age value in the BPDU is incremented (block 305). If the port A at block 304 does not continue to be or become the root, then no additional BPDUs are issued and the algorithm ends (block 306). Thus, if bridge A becomes the root bridge after the change, then all protocol entities between the root and the leaves of the tree are notified by issuing configuration BPDUs on all ports of the root bridge. If a configuration BPDU is received on any port other than the root port, or is received on the root port, and that port ceases to be the root port, then configuration BPDUs are issued to protocol entities between all designated ports prior to the change and leaves of the tree. If a configuration BDPU is received on a root port which continues or becomes the root port after the change, then the configuration BDPU is issued on all ports for which the bridge

is designated after the change, notifying protocol entities between the new root, or the same root with updated configuration information, and leaves of the tree.)

Response to Arguments

Applicant's arguments filed on 10/21/08 have been fully considered but they are not persuasive.

Summary and Response to Arguments

A. Applicant argues the rejection under 35 U.S.C. 102(b) under Seaman for claims 1, 16, and 26 as Seaman does not disclose the claimed limitations, as Seaman does not teach "the first bridge being scheduled for updating" .

As to point A, applicant's arguments are not persuasive, as in the context of the first bridge being scheduled for updating. The examiner respectfully disagrees with applicant assertions. In Col. 2 lines 18 -33 Seaman discloses the first bridge being scheduled for updating (Col. 2 lines 18- 33 According to the spanning tree protocol of the standard, <u>each port on a bridge can assume a blocking state in which frames are not forwarded through the port, or a forwarding state in which frames are forwarded through the port.</u> For a transition from the blocking state to the forwarding state, the protocol requires the port to proceed through transitional states referred to as the listening state and the learning state. In the listening state, the port is preparing to participate in frame relay, however frame relay is temporarily disabled to prevent temporary loops. <u>In the listening</u>

state, the port monitors information related to the topology in the network for an interval referred to as the forward delay timer. If no information is received which causes a change in state of the port before expiry of the forward delay timer, then the port transitions to the learning state.)

B. Applicant argues the rejection under 35 U.S.C. 102(b) under Seaman for claims 1, 16, and 26 as Seaman does not disclose the claimed limitations, as Seaman does not teach "restoring the first state of the network".

As to point B, applicant's arguments are not persuasive, as in the context of the restoring the first state of the network. The examiner respectfully disagrees with applicant assertions. In (Col. 2 lines 51-60 In a network of bridges which have a topology managed according to the spanning tree protocol, whenever a bridge detects a change in topology, such as for example when an active link fails, the bridge notifies the root of the active topology with a bridge protocol data unit BPDU packet. The protocol entity at the root of the topology then communicates the change to all of the bridges in the tree. Upon receiving such a notification, the bridges time-out their forwarding databases on all ports, recreate the topology and relearn the MAC addresses for the forwarding databases.) Recreating i.e. restoring takes place after relearn the MAC addresses for the forwarding databases. This paragraph shows that the first state is functional then there was disruption, recreating takes place then it goes back to its

original functioning state. Furthermore, nothing in the applicants claim language teaches restoring network topology is the same topology as it was before the failure has occurred. Examiner gave the broadest interpretation to the claim language.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashley d. Turner whose telephone number is 571-270-1603. The examiner can normally be reached on Monday thru Friday 7:30a.m. - 5:00p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached at 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-270-2603. Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patent Examiner:

____

Ashley Turner

Date:________

Supervisory Patent Examiner

____

Nathan Flynn

Date:_______

/Nathan J. Flynn/

Supervisory Patent Examiner, Art Unit 2454